2011000304020091
EXAMINATION OCTOBER 2024 (ATKT EXAM)
BACHELOR OF SCIENCE (COMPUTER SCIENCE)
(FOURTH SEMESTER)
AMPLIFIERS AND LINEAR INTEGRETED CIRCUITS ELECTRONICS-III

[**Time: As Per Schedule]** **[Max. Marks: 50]**

Instructions:
1. Fill up strictly the following details on your answer book
- a. Name of the Examination: **BACHELOR OF SCIENCE (COMPUTER SCIENCE) (FOURTH SEMESTER)**
- **b.** Name of the Subject: **AMPLIFIERS AND LINEAR INTEGRETED CIRCUITS ELECTRONICS-III**
- c. Subject Code No: **2011000304020091**

2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All symbols and abbreviations have their usual meaning.
5. Non-programmable calculators are allowed.
6. Q.1 is compulsory.
7. Assume data if necessary.

Seat No:

Student's Signature

Q.1 Answer in short: **8**

a) What is an amplifier?
b) Define an oscillator in electronic circuits.
c) What is a negative feedback?
d) What is cross-over distortion?

Q.2 a) Explain the concept of feedback in amplifiers. Discuss the advantages and disadvantages of using feedback. **10**

b) An amplifier has a gain of 1000 without feedback and cut-off frequencies are f_1=1.5 KHz and f_2=500 KHz. If 1% of output voltage of the amplifier is applied as negative feedback, what are the new cut-off frequencies? **4**

OR

a) Explain the working principle of RC phase shift oscillator with the help of proper diagram. Derive necessary expression for frequency. **10**

b) An RC phase shift oscillator use three identical RC sections in the feedback network. The value of the components are R=100K Ω and C=.01μF. Calculate the frequency of oscillation. **4**

Q.3 a) Draw the circuit diagram for transistorized Bistable multivibrator. Explain the operation of Bistable multivibrator. **10**

b) What is the origin of the name Astable, Monostable and Bistable multivibrator? **4**

OR

a) Explain the working of a Class B push pull amplifier. Prove that the even harmonics have cancelled in Class B push pull amplifier. **10**

b) What is difference between voltage amplifier and power amplifier. **4**

Q.4 Write short note on (Any TWO) **14**

a) Colpitt's Oscillator
b) Monostable multivibrator
c) Complementary Symmetry amplifier
d) Single Tuner Amplifier

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